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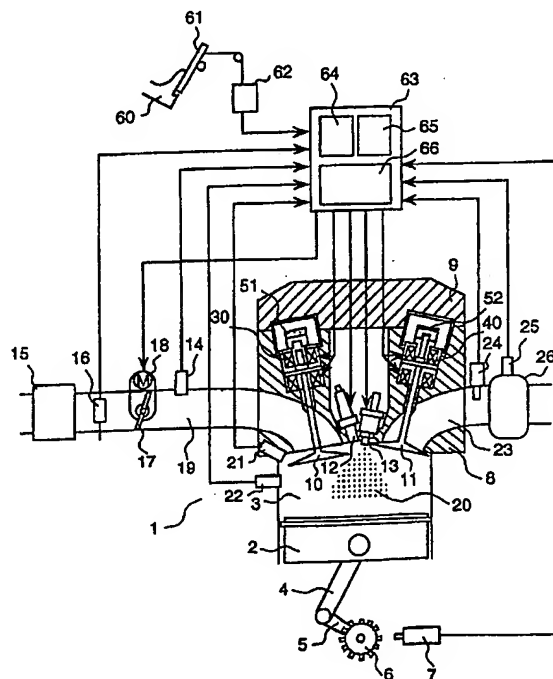
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54 Verfahren zum Steuern eines Verbrennungsmotors

57 Ein Verfahren zum Steuern eines Verbrennungsmotors, der einen Ventilmechanismus mit einem Einlaßventil (10) und einem Auslaßventil (11), die in einem Einlaßanschluß (19) bzw. in einem Auslaßanschluß (23) vorgesehen sind, eine Ventilmechanismus-Steuereinrichtung (30, 40, 64) zum Steuern des Ventilmechanismus, eine Betriebszustand-Erfassungseinrichtung (66) zum Erfassen eines Betriebszustandes des Verbrennungsmotors (1) sowie eine Drosselklappe (17) zum Steuern der Ansaugluftmenge als Antwort auf den Niederdrückungsgrad eines Fahrpedals (61) enthält. Das Verfahren enthält die folgenden Schritte: Steuern der Drosselklappe auf einen hohen Öffnungsgrad unabhängig vom Niederdrückungsgrad des Fahrpedals, wenn die Betriebszustand-Erfassungseinrichtung einen Betriebszustand mit niedriger oder mittlerer Last ermittelt, und Steuern der Ansaugluftmenge durch Steuern des Ventilschließzeitpunkts und/oder des Ventilhubbetrags des Einlaßventils. Ein Pumpverlust während niedriger und mittlerer Lastzustände kann stark reduziert werden, der Kraftstoffverbrauch kann verbessert werden, schließlich kann während eines hohen Lastzustands die Erzeugung eines Klopfens vermieden werden.



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===== EPODOC =====

TI - Method of controlling internal combustion engine

AB - A method of controlling an internal combustion engine includes mechanism including an intake valve and an exhaust valve provided respectively to an intake port and an exhaust port of a cylinder of the internal combustion engine, a valve mechanism control means for controlling said valve mechanism, an operation condition detection for detecting an operation condition of the internal combustion engine, and a throttle valve for controlling an intake amount in response to an operation amount of an acceleration pedal. When the method of the internal combustion engine, wherein when the operation condition detector judges as a low load or a middle load of the operation condition of the internal combustion engine, the throttle valve is controlled to a high opening degree condition regardless of the operation amount of the acceleration pedal, and by controlling a valve closing timing and/or a valve lift amount of the intake valve, the intake amount is controlled. A pumping loss during a low and a middle load conditions can be reduced widely, a fuel consumption can be improved and further during a high load condition knocking can be prevented.

PN - US6039026 A 20000321

AP - US19980174151 19981019

PR - JP19970284853 19971017 !

PA - HITACHI LTD (JP)

IN - NAKAYAMA YOKO (JP); OHSUGA MINORU (JP); NOGI TOSHIHARU (JP); TOKUYASU NOBORU (JP); SHIRAISHI TAKUYA (JP)

EC - F01L9/04 (N); F02D13/02 (N); F02D33/02B (N); F02D35/02 (N); F02D41/14F (N)

ICO - R01L201/00 (N); R02B75/12D (N)

CT - US5209193 A []; US5230320 A []; US5553573 A [];

US5724927 A []; US5787848 A []; US5809953 A [];

US5845613 A []; JP2123244 A []; JP6108858 A []

DT - **

===== WPI =====

TI - Valve control for fuel injected IC engine

AB - DE19847851 NOVELTY - An energy saving valve control for an IC engine has the throttle valve (17) operated with the throttle pedal setting for medium to large torque. For medium to low torque the throttle valve is set fully open and the timing of the inlet and exhaust valves is adjusted to provide the optimum air intake, to match the engine requirement and the fuel injection rate. The inlet and exhaust valves are operated by a servo control, without direct mechanical linkage to the engine. The engine is able to operate with an enhanced efficiency by not having to work against low pressure in the inlet manifold, at low speeds.

- USE - Fuel injection of internal combustion engine.

- ADVANTAGE - The pump leakage is reduced, as is the fuel requirement of the engine.

- (Dwg.1/14)

USAB - US6039026 NOVELTY - An energy saving valve control for an IC engine has the throttle valve (17) operated with the throttle pedal setting for medium to large torque. For medium to low torque the throttle valve is set fully open and the timing of the inlet and exhaust valves is adjusted to provide the optimum air intake, to match the engine requirement and the fuel injection rate. The inlet and exhaust valves are operated by a servo control, without direct mechanical linkage to the engine. The engine is able to operate with an enhanced efficiency by not having to work against low pressure in the inlet manifold, at low speeds.

- USE - Fuel injection of internal combustion engine.

- ADVANTAGE - The pump leakage is reduced, as is the fuel requirement of the engine.

PN - US6039026 A 20000321 DW200021 F02D9/00 000pp

- DE19847851 A1 19990422 DW199927 F02D43/04 020pp

- JP11117777 A 19990427 DW199927 F02D13/02 011pp

PR - JP19970284853 19971017

PA - (HITA) HITACHI LTD

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DC - Q52 X22
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AN - 00 ; F02D41/02 ; F02D41/04 ; F02D41/30 ; F02D43/00 ; F02D43/04 ; F02D45/00
- 1999-278950 [24]

FIG. 1

